

REMARKS

1. Claims 1-4 and 13 were rejected under 35 U.S.C. § 102(b) as being anticipated by Cox et al. (US 4,935,010).

2. Applicant respectfully traverses Examiner's grounds of rejection. Applicant's claimed invention includes several novel and nonobvious features that distinguish over the cited prior art.

Independent claims 1 and 13 distinguish over Cox et al. in that the valve body, which includes a valve element with a passage therethrough, is axially movably with respect to the connector body. Claims 1 and 13 also distinguish over Cox et al. in that the connector body has a tubular portion extending from it; the tubular portion being further defined as acting against the valve element to at least partially open the valve element when the valve body is moved to the open position.

Claim 13 further distinguishes over Cox et al. in that the tubular portion extends through the passage in the valve element from the distal side to the proximal side when the valve body is in the open position. This novel and nonobvious feature is also recited in dependent claim 4. Similarly, dependent claim 2 recites that the tubular portion is applied against the distal side of the valve element when the valve body is in the open position.

These claimed features are in marked contrast to the disclosure of Cox et al. in which there is no valve body axially movably with respect to the connector body. Consequently, the valve element is fixed with respect to the connector body. Furthermore, the connector body does not have a tubular portion extending from it that acts against the valve element to open the valve element.

Instead, Cox et al. has a separate fitting, referred to as a ducted member 9, with a precursive portion 12 that penetrates the membrane 4 when the ducted member 9 is moved distally with respect to the housing 2. This solution is quite similar to the hemostatic valve disclosed by Catlin (US 5,195,980), which was noted on page 3 of applicant's specification, in

that it uses a separate fitting with a tubular member to penetrate the valve element or membrane from a proximal side to a distal side. This solution poses two problems. First, the additional fitting and the tubular extension elongate the valved connector unnecessarily, requiring all of the inserted catheters and instruments to be that much longer. Second, the configuration of these connectors creates internal steps or cavities within the connector that may impede, divert or damage a catheter or instrument during insertion and that may also create a nidus for stagnation and clotting of blood.

By making the tubular portion an extension of the connector body and by placing the valve element in a valve body axially movable with respect to the connector body, applicant's invention has eliminated these problems inherent in the prior art devices.

For these reasons, applicant submits that claims 1-4 and 13 are patentable over Cox et al. under 35 U.S.C. § 102(b).

3. Claims 5-12 and 14-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Cox et al. (US 4,935,010) in light of Nelson et al. (US 5,613,954), Cheer et al. (US 5,102,395) or Schmidt et al. (US 5,613,663).

4. Applicant respectfully traverses Examiner's grounds of rejection. As noted above, Cox et al. do not disclose the novel and nonobvious features of a valve body that includes a valve element with a passage therethrough, which is axially movably with respect to a connector body, or a tubular portion extending from the connector body that is applied against the valve element to at least partially open the valve element when the valve body is moved to the open position. Nor do Cox et al. disclose that the tubular portion extends through the passage in the valve element from the distal side to the proximal side when the valve body is in the open position.

None of the secondary references, Nelson et al., Cheer et al. or Schmidt et al., disclose or even suggest these novel and nonobvious features, therefore no possible combination of these references with Cox et al. could render applicant's claimed invention obvious.

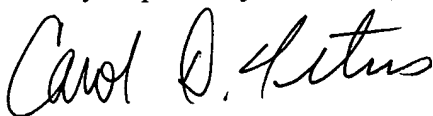
Furthermore, as noted above, applicant's invention solves important technical problems not solved or even contemplated by the prior art references.

For these reasons, applicant submits that claims 5-12 and 14-19 are patentable over Cox et al. in light of Nelson et al., Cheer et al. or Schmidt et al. under 35 U.S.C. § 103(a).

CONCLUSION

Applicant submits that the claims all define novel subject matter that is unobvious. Therefore, allowance of such claims is submitted to be proper and is respectfully requested. If Examiner deems that additional changes are needed prior to allowance of the claims, Examiner is urged to initiate a telephonic interview with applicant's representative at the telephone number listed below.

Very respectfully submitted,

A handwritten signature in cursive script, reading "Carol D. Titus".

Carol D. Titus

Patent Agent

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**COPY OF THE AMENDED CLAIMS WITH MARKINGS
TO SHOW THE CHANGES MADE**

1. (amended) A valved connector, comprising:
a connector body having a tubular portion extending therefrom; and
a valve body including a valve element with a passage therethrough, said valve body being axially [movably] movable with respect to said connector body;
wherein said valve body is movable from a closed position in which said tubular portion of said connector body is exterior to said passage of said valve element to an open position in which said tubular portion of said connector body is applied against said valve element to at least partially open said valve element.

13. (twice amended) A valved connector, comprising:
a connector body having a tubular portion extending proximally therefrom, and
a valve body including a valve element with a passage therethrough, said valve body being positioned at a proximal end of said connector body and axially [movably] movable with respect to said connector body;
wherein said valve body is movable from a closed position in which said tubular portion of said connector body is exterior to said passage of said valve element to an open position in which said tubular portion of said connector body extends through said passage of said valve element from a distal side to a proximal side of said valve element, wherein when said valve body is in said closed position said passage of said valve element closes to form a fluid tight seal, wherein when said valve body is in said open position said valved connector presents an open channel for introducing a secondary device inserted through said connector body, and wherein when said valve body is in said closed position with the secondary device inserted therethrough, said passage of said valve element closes to form a fluid tight seal around the secondary device.